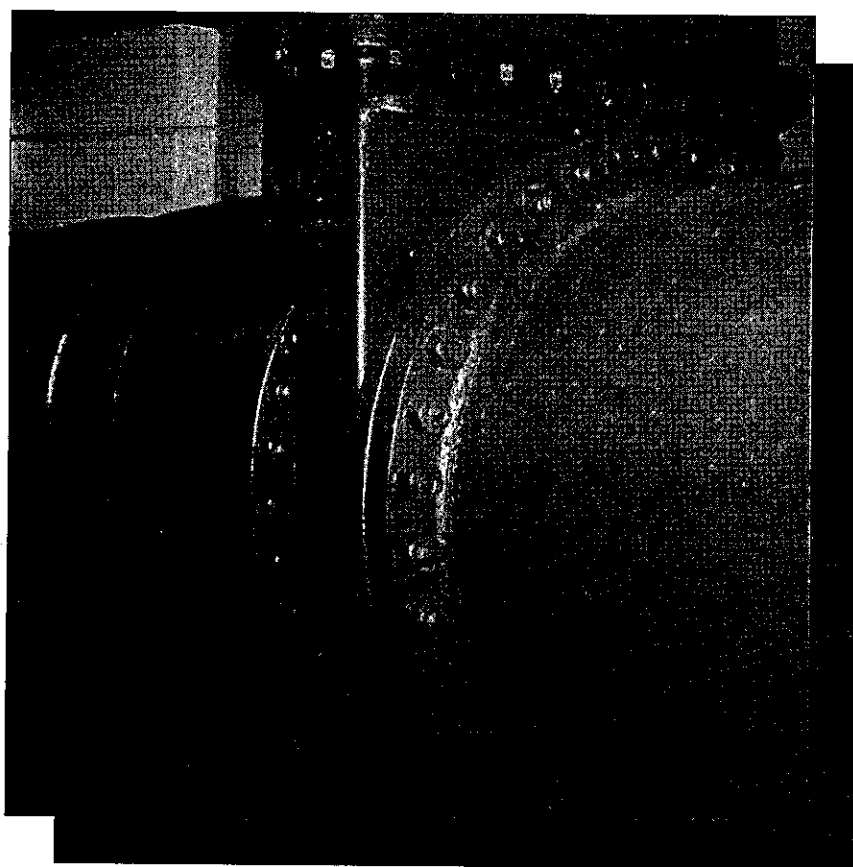


DEP Division of Water Supply
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Division of Water
Supply

Department of
Environmental
Protection

Executive Office of
Environmental Affairs

Commonwealth of
Massachusetts

Volume 3, Number 1
Winter 1990

DEP To Promulgate New Regulations for Underground Storage of Hazardous Products in Water Supply Protection Areas

Mary Wheeler

The Department of Environmental Protection is drafting regulations designed to remove substandard underground storage tank systems (USTs) from use in public water supply protection areas.

The regulations will require closure and removal (in compliance with 527 CMR 9.00) of UST systems which are located in designated water supply protection areas and which store hazardous products (as listed in 310 CMR 40.00), are 15 years of age or older, and are constructed of porous materials (e.g., concrete or unprotected metal).

The water supplies addressed in this regulation are systems which withdraw 100,000 gallons per day or more from groundwater sources or from surface water reservoirs, ponds, or lakes. The schedule for closure will be phased in based on the proximity of the tank system to the water supply, age and size of the tank, and the product stored within. The proposed schedule for closure is as listed in the chart below, as well as pertinent definitions for water supply protection areas.

Date	Water Supply Area	Substandard UST System
4/1/92	Zone I and Zone S1	All Subs. USTs age 15+ years
4/1/94	Outside Zone I and Zone S1 but inside Zone II (Interim Zone II) or in Zone S1	Subs. USTs age 15+ years storing a hazardous product other than heating oil
4/1/95	Outside Zone I & Zone S1 but inside Zone II (Interim Zone II) or Zone S2	Subs. USTs age 15+ years, storing heating oil, and at least 2,000 gallons in size

Continued on page 2

Public Outreach on Wellhead Protection

Sandy Mullaney

DEP is going forward with efforts to finalize the Massachusetts Wellhead Protection Program Report submitted to the U.S. Environmental Protection Agency (EPA) in June, 1989.

The Report was prepared by the Division of Water Supply (DWS) to meet requirements mandated under the 1986 Amendments to the Safe Drinking Water Act (SDWA). The Report outlines Massachusetts' multifaceted approach to protecting recharge areas which contribute water to public supply wells. It also describes programs which have been operational in Massachusetts for several years to identify and protect wellhead resources.

Since the June submission date, DWS has intensified outreach on wellhead protection and has actively solicited public input on the report.

Hearings were conducted by DWS in January to discuss current programs in Massachusetts and to accept formal testimony. The hearings in Springfield and Natick were well attended and provided DWS an excellent opportunity to describe the planning, technical and educational resources available to municipalities and water suppliers through the Community Technical Assistance Program.

While many initiatives to protect wellhead areas are underway at the federal, state and regional levels, much of the burden to follow through on strategies to safeguard groundwater falls on the shoulders of water suppliers and municipal governments. This burden is further complicated by current financial constraints which may severely limit wellhead protection planning at the local level. The Department is encouraging municipalities and water suppliers to utilize the planning and technical services available through the Boston office and has taken full advantage of the release of the report and hearings to make available services known.

The report has been well received by state agencies, the public, and EPA. The Department is now looking forward to EPA approval of the report and allocation of SDWA funds to Massachusetts for wellhead protection. These funds will be earmarked for implementing program elements outlined in the report, with a special emphasis to be placed on expanding technical assistance to communities and water suppliers.

The report is available for review at Boston and the DEP Regional offices. DWS has also prepared a wellhead protection fact sheet and brochure summarizing the main points covered in the document. Water suppliers and local officials are encouraged to avail themselves of these and other materials and services geared to enhance protection of drinking water supplies. These efforts are carried out by the Department to encourage each of us to take a part in wellhead protection. For more information on wellhead protection or for copies of the fact sheet and/or brochure, call DWS at (617) 292-5770.

DEP Encourages Full Cost Pricing of Water

Trish Garrigan
Tony Abruzese

Providing a good, clean supply of water requires sound financial management by water utilities. This is necessary to ensure that adequate funds are available for operating, maintaining, improving, and protecting water supply sources and systems.

As we are all well aware, the cost of providing water is rising. More stringent federal drinking water standards, reductions in state grant money, requirements to control existing and potential threats to water supplies, and the increasing demand for more water have resulted in the increasing costs of providing water.

By setting water rates based on the "full cost" of providing water and by devoting water revenues to the water utility expenses only, water utilities can ensure adequate financing, encourage water conservation, and increase public awareness.

Continued on page 2

Proposed Regulations Change for New Source Approval Process

Michael Rapacz

Two public hearings were held in December to solicit comments on proposed regulatory changes that would have required a community to institute a wellhead protection bylaw or board of health regulation prior to the Department approving a source to go on line.

A large majority of the 50 commentators pointed out that, although wellhead protection mechanisms are certainly necessary, it is unreasonable to penalize the people responsible for getting a source on line, particularly because they have minimal control over how a local town meeting or board of health views wellhead protection.

It was also pointed out several times that it is about time to start actually using the Zone II delineations for wellhead protection, but the proposed regulation changes are aimed only at protecting new sources. What of the far more numerous and frequently more productive existing sources? How will they be protected? Both of these excellent points are currently

under discussion within the Department.

The Division of Water Supply is proposing that communities be given a realistic period of time in which to implement wellhead protection mechanisms commensurate with the model provided in the proposed regulation change. To whatever degree possible, the Division would assist towns in their efforts to implement wellhead protection mechanisms.

Protecting existing sources will presumably require a different approach than a Water Supply regulation change and the proper vehicle for doing this is currently being evaluated. Cities, towns, and water suppliers should proceed whenever possible to implement their own local wellhead protection mechanisms. A discussion document summarizing the comments received and describing DEP's position on the proposed changes will be forthcoming.

The document has been drastically changed in response to your comments. Thank you very much for providing us with your insights. It was time well spent. □

Water Supply Related MEPA Activities

Heidi Feusi

All of you water suppliers out there will be pleased to know that the DWS has increased its review of MEPA (Massachusetts Environmental Policy Act) projects located at or near water supply sources.

The MEPA process establishes thresholds and procedures for proposed projects that may have an environmental impact. Proposed projects that have exceeded MEPA thresholds are required to file an ENF (Environmental Notification Form) with the Secretary of Environmental Affairs. DWS reviews these ENF's for water supply concerns and brings comments to the attention of the MEPA agent.

DWS comments can have significant impact in determining whether the project will require further review. As such, DWS has intensified its review of MEPA projects at this stage. As a water supplier you should comment on proposed projects that may affect your water supply sources. You can obtain a copy of ENFs filed at the Secretary's Office (ENFs are listed in the Environmental Monitor) by calling the MEPA office at (617) 727-5830. The Environmental Monitor is published twice each month.

DWS has developed a MEPA tracking database to help with the review of MEPA projects, specifically ENFs that are filed with the MEPA office. During the period between January 1st and December 31, 1989, approximately 511* ENFs were published in the Environmental Monitor (EOEA project numbers 750 thru 8077). Of these 511, approximately 171 projects were pre-screened by DWS as having water supply concerns or issues.

The most common water supply issues that DWS observed in reviewing these ENFs for the 1989 reporting period were projects that:

- ◆ Are located on a watershed, aquifer, recharge area, tributary to a reservoir, near a reservoir, or zone of influence of a well field.
- ◆ Result in an increase in paved surface area over an aquifer.
- ◆ Have public or private wells located within 1/2 mile radius.
- ◆ Use over 100,000 GPD or include the construction of a new well.
- ◆ The project itself is water supply related.

Below is a table that shows the distribution of ENF's filed in 1989 by region:

Region	No. of ENFs filed in 1989	No. of ENFs pre-screened	%
1	76	27	36%
2	125	59	47%
3	170	48	28%
4	140	37	26%
Total:	511	171	33%

* note: EOEA #'s 7815-7783 and 7906-7938 were not included in this report. □

Protection Areas, continued from page 1

Water Supply Protection Areas

◆ **Zone S1** is the area within one hundred (100) feet of the maximum high water level of a reservoir, lake or pond used for a public water supply source.

◆ **Zone S2** is the area within one-half mile of the maximum high water level, and within the watershed boundary of a reservoir, lake or pond used for a public water supply source.

◆ **Zone I** is a four hundred (400) foot radius around a public water supply well that must be owned or controlled by the water supplier.

◆ **Interim Zone II** is a one-half mile radius around a public water supply well. **Zone II** is the delineated zone of contribution to a public water supply well as approved by the Department.

Notes:

1. As the substandard USTs described above reach 15 years of age after the above dates, they will be closed. As new water supplies withdraw 100,000 gallons per day, the above substandard USTs will be closed within the first year of the supply's operation.

2. If age of UST is unknown, it is assumed to be 15 years. If size is unknown, it is assumed to be 2,000 gallons.

New Policies for Bedrock and Confined Aquifer Wells

Paul Blain

In the continuing efforts to update and streamline the New Source Approval Process, the Division of Water Supply, with direction provided by its Groundwater Advisory Group, has revised the procedures for the development of new public groundwater supplies located in fractured bedrock or confined aquifers.

In the development of these policies, emphasis has been placed on the delineation and protection of aquifers and recharge areas that may not be afforded such protection under previously existing guidelines and policies. These policies also provide a mechanism to determine the safe yield of public water supplies in these aquifers.

Developmental procedures for bedrock public supply wells stress a better understanding of the mechanism of fluid flow and fractured bedrock hydraulics. Evaluation of structural trends, fracture traces and orientation, and the presence of faults in bedrock outcrops results in a Zone II that is more conceptual in nature than those required for sand and gravel wells.

The developmental procedures for confined aquifer public supply wells result in a conceptual Zone II that is the product of an extended pumping test. They also include: increased emphasis on the investigation of surficial geology, determination of lateral extents of confining layers, and hydraulic interaction between the overlying stratigraphic units.

More information and copies of the policies for the development of groundwater supplies in fractured bedrock and confined aquifers may be obtained through the DWS regional offices or Technical Services, DWS, Boston. □

Full Cost Pricing, continued from page 1

Full cost pricing of water refers to charging water rates that reflect the "full cost" of providing water. The cost of providing water varies widely among utilities. Factors that affect this cost include the age of the system, the type of treatment, the size of the service area, the cost of pumping, etc. These are costs related to operate the system and provide the water. But there are also many other costs involved in ensuring that the water supply remains adequate and of good quality. These include costs related to watershed management or aquifer protection, emergency

planning and water conservation, long term planning, and water supply development.

Achieving full-cost pricing can be quite a challenge. There are certain variables such as those listed in MGL Chapter 40 section 39J (Pricing System) which should be included. What are all the costs involved in providing and maintaining an adequate supply of water for your system? Have these costs changed?

Ensuring that adequate funds are available to operate, maintain, improve and protect your water supply system is critical for good water management. □

In The Main

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The Commonwealth of Massachusetts
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Executive Office of Environmental Affairs
John P. DeVillars, Secretary

Department of Environmental Protection
Daniel Greenbaum, Commissioner

Division of Water Supply
David Y. Terry, Director
Tony Abruzzese, Editor

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Water Management Update

Permit Update

Beth McCann

Charles and Blackstone Basins

The Division of Water supply issued the first round of Water Management permits in the Charles River Basin in November, 1989. The first round of Blackstone permits were issued in February, 1990.

Boston Harbor and Taunton Basins

The Division of Water Supply conducted the second of two sets of workshops for permit applicants in the Boston Harbor and Taunton River Basins on January 22 and 23, 1990.

The workshops were intended to assist applicants in assembling the information needed to complete a Water Management permit application. Permit applications in these two basins were due on February 28, 1990. Applicants will now have six months in which to complete any additional application requirements and to respond to any public comments received concerning their proposals.

South Coastal Basin

Permit application forms for the initial round of Water Management Act permitting in the South Coastal Basin will be available from the Department of Environmental Protection during the first week in March, 1990. The permit application filing date for this basin is August 31, 1990. Second and third round Water Management permit applications will also be accepted for the Hudson, Ipswich and North Coastal Basins on August 31, 1990.

Water withdrawers will need to apply for a permit if they withdraw more than 100,000 gallons per day from ground or surface water and do not have a Water Management Act registration. Water Management Act registrants who are now withdrawing more than 100,000 gallons per day over their registered volume will also need a permit.

For more information or to receive an application form, contact the Water Management Program staff at (617) 556-1077.

Revised Water Management Permitting Schedule

Beginning in August 1990, the Division of Water Supply is revising the Water Management Permitting schedule. The Division will be permitting one river basin every three months rather than two basins every six months. The change in the permitting schedule has been made so that program staff can examine each river basin in more detail during the initial permitting round, and to spread the permit review workload more evenly throughout the year. □

[See revised permitting chart on page 4.]



Designating Local Water Resource Officials

Trish Garrigan

An important part of the success of the Water Management Program is local comment and input. The Water Management Act suggests a Local Water Resources Management Official (LWRMO) be designated by the chief elected official in each municipality in the Commonwealth. To date 130 LWRMO's have been designated.

The official serves as the primary contact point for local review and comment on applications for water withdrawal permits (withdrawals over 100,000 gallons per day). The LWRMO is also responsible to submit and administer the Local Water Resources Management Plan.

The LWRMO should be able to provide a community wide viewpoint, with knowledge of water resources protection issues, water conservation, and water supply as well as the community's future goals.

The department has a brochure entitled "Local Water Resources Management Official" and a **Local Water Resources Management Official's Handbook** which is sent to LWRMOs as they are designated. As river basins come up for permitting under the Water Management Act, the Department will be contacting chief elected officials regarding designating a LWRMO.

For a copy of the brochure, or if you have additional questions, please call the Division of Water Supply at 556-1077 or 292-5654. □

DEP Allows MWRA Water Emergency to Expire

Andrew Gottlieb

Citing an improvement in supply status and dramatic reductions in water use, the Department allowed the Declaration of Water Emergency covering the area served by the Massachusetts Water Resources Authority to expire on February 16, 1990.

The declaration had been issued at the request of the MWRA and the Metropolitan District Commission due to the low level of the Quabbin Reservoir and a demand level which exceeded the reservoir's safe yield. The declaration covered the 44 municipalities served by the MWRA and included measures deemed necessary to reduce demand in the short run to make best use of available supplies, and measures which would produce a long term benefit to the system through enhanced demand management and conservation measures which were intended to bring demand into line with the safe yield limitation of 300 mgd. Restrictions imposed included outdoor watering restrictions, leak detection and repair, public education and acceleration of other ongoing MWRA conservation programs.

The results of the conservation programs have been dramatic. Demand has dropped to 287 mgd, down from 324 mgd in 1988 and 336 mgd in 1987. Over 26.4 mgd in leakage has been identified, with 21.9 mgd of that repaired. In addition, the system has benefited from high precipitation in 1989. Rainfall was almost 10 inches above normal, which, when combined with the low demand on the system, allowed Quabbin to recover to 83.9% of capacity on January 30, 1990, up from roughly 68% a year ago. The wet year allowed partially supplied users to take less from the MWRA than normal, a factor which also contributed to the recovery of the reservoir. Twelve month projections show the system status improving slightly with normal precipitation. Record drought conditions would be necessary to drive the system back into drought warning status.

The success experienced in reducing demand in the MWRA system is a tribute to the dedicated efforts of the MWRA, the municipal water departments, and the general public. Participation and commitment from all parties is a required ingredient in an undertaking as significant as the effort required to reverse the long term trend of increasing demand on the MWRA system. The progress in reducing demand, and keeping it below 300 mgd, will serve to protect and insulate the system from future water emergencies when the next drought inevitably occurs. □

Groundwater Demonstration Project for Surface Water Treatment Rule

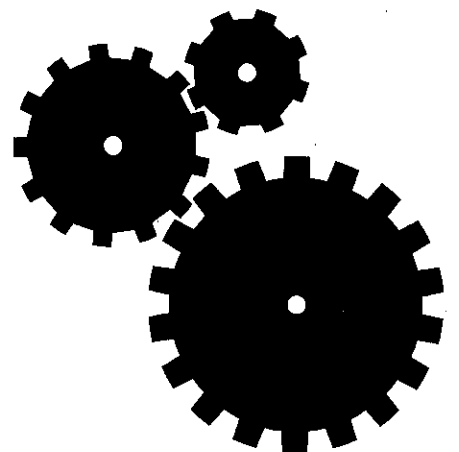
Michael Rapacz

The Division of Water Supply is sponsoring and partially subsidizing a demonstration project that is designed to convince the EPA that a large majority of the groundwater sources in Massachusetts should not be required to filter.

The Surface Water Treatment Rule states that groundwater sources influenced by surface water should apply filtration. This project should demonstrate that groundwater sources that are hydraulically connected to surface water features are not susceptible to Giardia contamination because of the natural filtering media provided by the subsurface geologic deposits separating the well from the surface water feature.

Sixteen water suppliers across the state will be asked to participate in the program which requires weekly sampling of the wellhead for temperature, specific conductance, and turbidity for a period of one year. Twice per year the source will be tested for Giardia and similarly sized particulate indicator matter by the Division. Many laboratories across the state have agreed to run the weekly analysis for free in an effort to support the project, which if successful will save the water supply community substantial time, trouble and money.

Questions about how the project is progressing should be forwarded to Michael Rapacz at (617) 292-5952. □



DEP to End Most Free Testing

Budget cuts have forced the Department of Environmental Protection to discontinue routine testing of municipal water supplies — a service the Commonwealth has provided free of charge for nearly a century. The agency has notified officials in all communities with public water systems that as of July 1, routine samples will have to be analyzed by state-certified private labs.

"The elimination of state-funded testing doesn't mean we are any less concerned about the quality of the water people are drinking," said DEP Commissioner Daniel S. Greenbaum. "Since we certify the labs that are taking over the job, we will remain in a position to ensure compliance with all state and federal water quality regulations.

"But having only so much money for testing, we believe it is essential to spend it on those specific water supplies we know are contaminated or in jeopardy," he added.

Despite budget cuts, Greenbaum said, DEP will continue to provide free testing of:

- ◆ Emergency samples, in the event of suspected water-borne illness or contamination;
- ◆ Confirmation samples, when exceedances of Federal standards for volatile organic compounds (e.g. pesticides or solvents) are detected;
- ◆ Periodic audit samples, to check the accuracy of tests performed by certified labs; and
- ◆ Annual samples of source waters not required by law.

That limited testing will be conducted only at DEP's 103-year-old Lawrence Experiment Station. Budget cuts also have resulted in the closing of a satellite lab on the campus of the University of Massachusetts at Amherst, a facility which opened its doors 66 years ago.

Elimination of routine municipal water supply testing and the closing of the Amherst lab will save DEP nearly \$200,000 in fiscal year 1991.

"We deeply regret the changes which the state's current fiscal situation is forcing us to make," said David Terry, Director of DEP's Water Supply division. "But we're doing everything we can to make the transition as smooth as possible for municipal officials."

DEP plans to schedule a series of regional workshops for public water suppliers to answer questions and provide further details on the phase-out of free routine testing. Those sessions will take place over the next several months. □

ALA Update

Peter Weiskel

Because we live in a densely populated state with predominantly shallow, unconfined aquifers, our public groundwater supplies are exceptionally vulnerable to contamination from adverse land uses. Chapter 286 of the Acts of 1982 established the Aquifer Land Acquisition Program to respond to this situation in a creative fashion.

To date, the ALA Program has enabled 18 municipalities and public water suppliers to acquire about 700 acres of key aquifer land worth over \$5 million. As an integral part of the program, a hydrogeologic study is conducted to delineate the primary recharge area (Zone II) of each groundwater source receiving funding. In fact, Zone II was first defined in the context of the ALA Program regulations, to assure that parcels proposed for acquisition were appropriately located.

Cross Connection Delegation Benefits

Martin Horne

As you know, in order to identify unprotected cross connections, public water suppliers are required to establish a program to survey their distribution systems and to semiannually inspect installed back flow prevention devices. In addition to these requirements, the public water suppliers may also request that the entire cross connection program be delegated to them from DEP.

DWS is happy to report that most of the water suppliers whose program submittals were due requested delegation. It is expected that at the next submittal deadline, June 30, 1990, many more facilities will request delegation. DEP encourages systems to request delegation of the cross connection control program due to the enormous benefits of delegation. Towns who have accepted delegation of the program are gaining more control over their distribution systems and are greatly decreasing the chance of contamination due to backflow occurrences. Also, administrative fees may be assessed for all costs incurred by the program. In other words, delegated towns are able to charge for their services and create a self-supporting cross connection program.

In the near future a training course will be given by DWS to assist public water suppliers in setting up a cross connection control program. Also, towns that have accepted delegation will explain some of the benefits of a delegated program and give advice to other interested towns. The delegated towns have achieved great success with the program and we hope that more systems become involved.

Congratulations go to the following delegate towns for outstanding cross connection control programs:

Boston	Amherst	Methuen
Easthampton	Quincy	Greenfield
Needham	Orange	Lynn
Westfield	Lawrence	Rutland
Amesbury	Templeton	Newburyport
Weymouth	Westford	Frammingham
Littleton	Tewksbury	Ashland
Easton	Wakefield	Dartmouth
Dennis	Oak Bluffs	

If you have any questions concerning requesting delegation please contact your Regional Office or Martin J. Horne at (617) 292-5719. □

Revised Water Management Permitting Schedule

Water Source	Effective Date: First Filing Date	Completion Date	Subsequent Filing Date	Subsequent Completion Date
Hudson River Basin	August 31, 1988	February 28, 1989	August 31, each year	February 28, each year
Blackstone, Charles Basins	February 28, 1989	August 31, 1989	February 28, each year	August 31, each year
Ipswich, North Coastal Basins	August 31, 1989	February 28, 1990	August 31, each year	February 28, each year
Boston Harbor, Taunton Basins	February 28, 1990	August 31, 1990	February 28, each year	August 31, each year
South Coastal Basin	August 31, 1990	February 28, 1991	August 31, each year	February 28, each year
Cape Cod Basin	November 30, 1990	May 31, 1991	November 30, each year	May 31, each year
Islands Basin	February 28, 1991	August 31, 1991	February 28, each year	August 31, each year
Buzzards Bay Basin	May 31, 1991	November 30, 1991	May 31, each year	November 30, each year
Concord Basin	August 31, 1991	February 28, 1992	August 31, each year	February 28, each year
Ten Mile Basin	November 30, 1991	May 31, 1992	November 30, each year	May 31, each year
Deerfield Basin	February 28, 1992	August 31, 1992	February 28, each year	August 31, each year
Housatonic Basin	May 31, 1992	November 30, 1992	May 31, each year	November 30, each year
Farmington Basin	August 31, 1992	February 28, 1993	August 31, each year	February 28, each year
Westfield Basin	November 30, 1992	May 31, 1993	November 30, each year	May 31, each year
Millers Basin	February 28, 1993	August 31, 1993	February 28, each year	August 31, each year
Connecticut Basin	May 31, 1993	November 30, 1993	May 31, each year	November 30, each year
Quinnebaug Basin	August 31, 1993	February 28, 1994	August 31, each year	February 28, each year
Chicopee Basin	November 30, 1993	May 31, 1994	November 30, each year	May 31, each year
Nashua Basin	February 28, 1994	August 31, 1994	February 28, each year	August 31, each year
French Basin	May 31, 1994	November 30, 1994	May 31, each year	November 30, each year
Shawsheen Basin	August 31, 1994	February 28, 1995	August 31, each year	February 28, each year
Merrimack Basin	November 30, 1994	May 31, 1995	November 30, each year	May 31, each year
Parker Basin	February 28, 1995	August 31, 1995	February 28, each year	August 31, each year
Narragansett Basin	May 31, 1995	November 30, 1995	May 31, each year	November 30, each year

Unfortunately, the ALA Program — like all grant programs in the Department — has been impacted severely over the past year by the state budget shortfall. Though \$15 million was authorized by Chapter 564, Acts of 1987, to fund Round III of the program (which was to include surface watershed, as well as aquifer lands), these funds were frozen in late 1988 and remain unavailable. In addition, a cap of \$1.48 million was placed on Fiscal Year 1989 reimbursements

to grantees from Rounds I and II. For FY 1990, the cap was cut 80% to \$300,000. The end result has been substantial delay in payments to communities now participating in the program.

The future of ALA for FY 1991 and beyond is unclear. What will not change is the unique vulnerability of the Commonwealth's water supplies, and the fact that over the long term, land acquisition remains the most reliable approach to aquifer and watershed protection. □

Lead Testing Support For Schools

Debra Northrop

The Division of Water Supply Water Quality Assurance Program conducted individualized technical assistance sessions during the week of January 16-19 to help schools with their own water supplies (Non-Transient Non-Community PWS) test for lead contamination in their drinking water distribution systems.

Lead poisoning is an important matter of concern. Low levels of exposure can lead to damage of the central and peripheral nervous system, learning disabilities, shorter stature, impaired hearing, and impaired formation and function of blood cells.

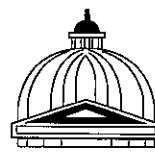
The January 11, 1990 *New England Journal of Medicine* published a study indicating that a greater number of young adults with high lead exposure as children experience school failure and reading disabilities. They also had higher school drop out rates.

Individualized technical assistance sessions were the highlight of this DEP program to help eliminate lead exposure from school drinking water. Never tried before, these half hour sessions were designed to help schools interpret test results, develop plans to modify drinking water systems with high levels of lead contamination, and give information about replacing coolers which contain lead parts. Help was also given to determine representative sampling points if money was an obstacle to school testing.

Materials were mailed to all NTNC schools previous to the technical assistance sessions explaining the hazards of lead, simplified testing procedures, and labs certified to test for lead. A sample letter for notifying parents of testing results and subsequent school modifications was also included.

DEP would like to thank the following NTNC schools for their cooperation with this sampling program. We encourage all other schools to complete their sampling efforts and send copies of their results to their Regional DEP Office.

Mohawk Trail Regional School, Buckland
Hawlemont Regional, Charlemont
Davenport School, Chesterfield
Goshen Center School
East Meadow School, Granby
West Street School, Granby
Granville School
Sandisfield Public School, Southwick
Shutesbury Elementary School
Shutesbury Preschool
Wales Elementary School
Hampshire Regional School District,
Westhampton
Mt. Greylock Regional School, Williamstown
Harvard Forest, Petersham
Nashoba Reg. High School, Bolton
Charlton Elementary School
Heritage School, Charlton
Phillipston Memorial School
Hale School, Stow
Pomposetticut School, Stow
Center Schools, Stow
Winslow School, Tyngsboro
Spofford Pond School, Boxford
Harry Lee Cole School, Boxford
Gov. John Carver Schools, Carver
Eastham Elementary School
Nauset Regional High, Eastham
South Elementary School, Plymouth
South High Vocational High School,
Plymouth
Christian Life Fellowship, Rehoboth
Old Colony Reg. Voc. H.S., Rochester
Truro Central School
Wellfleet Elementary School
Westport Elementary School □



Legislative Update

Steve McCurdy

The headline story from Beacon Hill during the 1989 Legislative session was the continuing budget woes facing the Commonwealth. The budget battles inhibited the Legislature's ability to take up other matters, including some important bills affecting Water Suppliers. At the same time, the Governor and Legislature implemented cuts that reduce municipalities' local aid packages, and State programs that have historically provided services to the cities and towns of the state. (See related story re: DEP to End Most Free Testing.) This will no doubt make the job of providing fit and pure water even a little more difficult for suppliers.

H-129 was one of the bills which expired with the session. This is the so-called "Certified Operator" bill which, having strong support from DEP, EPA, and the water supplier community, was expected to pass during the session. It has been re-filed for 1990, hopefully to a better ending.

H-6122, the "Cohen Bill," was intended to provide protection of the Quabbin and Wachusett watersheds through the purchase of land development rights. While targeting these two, the bill would have become a model for the protection of other watersheds across the state. This bill has also been re-filed.

H-6242, the "home water treatment device" bill, could not escape the House Ways and Means Committee, despite the lobbying efforts of some citizen's groups. Primarily a consumer protection bill, H-6242 outlined prohibited practices in the testing of drinking water by sellers of water treatment devices and in the sales techniques and practices of those sellers. It instituted penalties for violators.

Two important bills were passed, however. They were Chapter 275 and Chapter 361 of the Acts of 1989. Ch. 275 (the "Hayes Bill") creates a loan and grant program for sewage and drinking water treatment facilities, as well as monies for land acquisition for water supply protection. Ch. 361 creates a Drinking Water Protection Fund for communities who voluntarily wish to combine efforts to protect common drinking water sources.

The schedule for hearings in front of the Committee on Natural Resources and Agriculture is not available at the time of this writing. Hearings historically have begun in late February or early March. Feel free to contact the Division of Water Supply for additional information on particular bills or hearing schedules. □

Technical Assistance on Non-point Source Pollution Available to Water Suppliers

Mary Wheeler

These days public water suppliers are asked to wear many hats. One is that of land use planner, working to prevent contamination of drinking water supplies from inappropriate or improperly controlled land uses. But where can a water supplier learn about sources of contamination and how to control them? Assistance is now available through the Division of Water Supply's Community Technical Assistance Program (TAP) in Boston.

A new staff member was recently assigned to the TAP to provide technical assistance to water suppliers on land uses and activities which have the potential to contaminate their drinking water. The new member, Mary Wheeler, is part of the Department's Non-point Source Program and is available to assist public water suppliers in identifying and controlling nonpoint source pollution in their water supply areas.

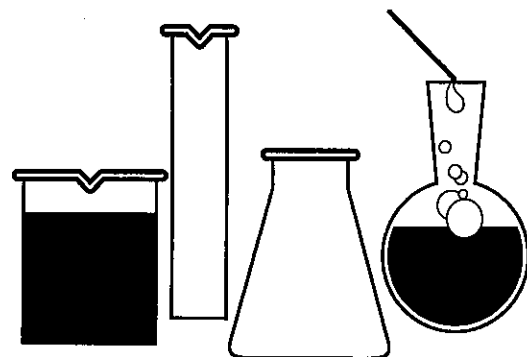
Non-point source pollution is a term used to describe pollution from diffuse sources, such as leaking underground storage tanks, that are not regulated as point sources. Point sources of pollution, such as the discharge of a wastewater treatment plant or the smokestack of an industry, are regulated with strict controls on the amount and types of pollutants which can be discharged. Non-point source pollution can result from many common land use activities, such as subdivision of land, stormwater runoff, logging of trees, and pesticide and fertilizer application. But there are ways to manage and prevent nonpoint source pollution, and the TAP is developing materials and disseminating information to help water suppliers learn about them.

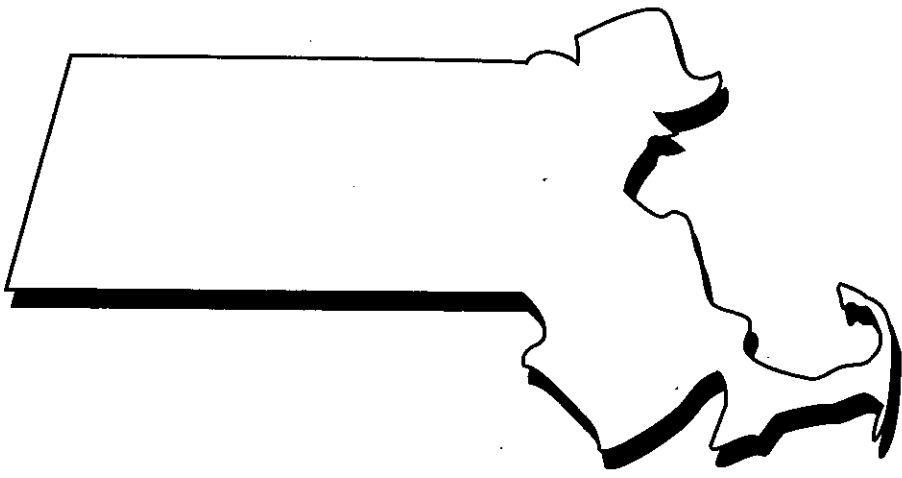
The first thing a water supplier should learn is what types of activities might cause pollutants to be released to ground or surface water. Next, a survey of the watershed or zone of contribution should be made to look for those kind of

land uses or activities. If inappropriate land uses or practices are discovered, there are methods, called best management practices or BMPs, to control or alleviate the pollution potential.

Local governments have broad authority to regulate or control existing and proposed land uses; and water suppliers should be a part of the municipal governing network which develops and implements those initiatives. Water suppliers are encouraged to work with municipal boards, commissions and committees that review and regulate land use to voice the need for protecting water supplies from contamination, and to study zoning in water resource areas to ensure that it allows only appropriate types of development to occur there in the future. The TAP can help with all of these steps through reference materials, model regulations and bylaws, tips on making land use surveys, and best management practices for controlling non-point source pollution.

If you are interested in the non-point source pollution technical assistance program, please call Mary Wheeler at (617) 292-5929, and she will be happy to assist you. □





City of Fitchburg Prepares Local Water Resources Management Plan

Trish Garrigan

Over the past year the City of Fitchburg has worked with the staff of the Water Resources Commission (WRC), the state's water resources policy setting body, to develop a **Local Water Resources Management Plan** using the WRC's guidelines. The effort was undertaken to test out the guidelines and produce a "sample plan."

In general, a Local Water Resources Management Plan discusses the community's goals and plans for: providing water supply; implementing water conservation measures; and protecting and managing water resources. The purpose of the planning effort is to provide a framework for a "plan of action" that the community has identified to protect resources and address problems. The planning effort is designed to facilitate communication within and among communities. The plan also provides a local viewpoint from which state agencies can make financial and water management decisions, such as distributing grant money, providing technical assistance or issuing permits.

The WRC guidelines provide a questionnaire format to follow while going through the planning process. Because of staff limitations, the WRC is no longer reviewing local water resources management plans. However, the guidelines are available for use by any interested community. Call the Department of Environmental Management, Division of Water Resources at (617) 727-3267 for a copy of "Guidelines for Preparing a Local Water Resources Management Plan." □

Salute to Communities

Jude Hutchinson

The Community Technical Assistance Program (TAP) within the Division of Water Supply, is a key element of the Massachusetts Wellhead Protection Program. TAP team staff work with cities, towns and regional planning agencies to promote comprehensive resource protection balanced with economic development and growth management. This column recognizes recent accomplishments at the local level.

Easthampton, Holyoke, Southamptn, and Westfield

These municipalities share a sole source of water, the Barnes River Aquifer, which services over 60,000 people. Much of the recharge area for the aquifer is under heavy development pressure. Individually, these towns passed bylaws controlling or restricting land uses in recharge areas; however, the aquifer needed stronger regional protection.

The Easthampton Board of Selectmen and the Pioneer Valley Planning Commission (PVPC) expressed the idea at a regional forum in March, 1988. Each community agreed to appoint three members to a formal Barnes Regional Aquifer Protection Committee.

The Committee worked arduously for several months under the guidance of Chris Curtis of the PVPC and a grant from the DEP 205(j) program. Efforts included a regional aquifer map, source identification, zoning revisions, health regulations, public education flyers, and recommendations on regional aquifer protection.

In December 1989, the municipalities signed a "Memorandum of Understanding" making the Committee official. One of the functions of the Committee is to review and comment on proposed developments and land uses with potential impact on the Barnes Aquifer System. We salute all parties!

Southampton

Southampton's efforts to educate the public about the need for a zoning bylaw to protect drinking water supplies were successful. Town meeting members adopted the bylaw in May and June 1989. We salute Southampton for its work at the local and regional levels.

Sunderland

Congratulations to the Town of Sunderland for adopting a Watershed Protection Zoning Overlay District in May 1989. Members of the Aquifer Protection Committee, representatives of town boards, worked with Lynn Rubenstein of the Franklin County Regional Planning Agency in developing this ordinance and educating Sunderland residents about the need for protection measures. It also passed health regulations on private wells, unregistered motor vehicles and septic systems.

Whately

A salute to Whately. The Town recently passed Board of Health regulations for private

wells and septic systems and plans to bring several zoning amendments to the spring town meeting.

Conway

During the past year, Conway's Groundwater Protection Committee studied the risks of land use activities on its drinking water supplies. Betsy Abert and Wilson Clayton were instrumental in seeing this task completed. Congratulations to all members and to Lynn Rubenstein of the Franklin County Regional Planning Commission for her assistance.

Williamstown

Under the direction of Barbara Bashevkin, Town Planner, the Town will vote on a water resource protection package containing hazardous materials controls, underground storage tank regulations, and advanced wetlands restrictions. We salute Barbara for her continued efforts.

Wilmington

Wilmington is actively pursuing townwide aquifer protection and plans to submit a groundwater protection district bylaw at the April town meeting. We salute the Board of Water and Sewer Commissioners, Conrad Gerhartz, and Barbara Sullivan, President of the League of Women Voters, for their efforts.

Many communities are preparing zoning articles related to water supply protection for spring town meetings. We applaud the efforts of local officials, water departments, citizen volunteers, and especially representative protection committees, in these endeavors.

We encourage you to educate residents about the bylaws and the need for local support of protection measures before town meeting.

Good luck to:

- ◆ Lanesborough and the Zoning Bylaw Committee, chaired by Karen Gold, as they prepare to submit an aquifer protection district bylaw to town meeting in May.
- ◆ Foxborough and the Board of Water and Sewer Commissioners who will submit townwide aquifer protection maps defining recharge areas.
- ◆ Dedham and Nan Crossland from the Dedham-Westwood Water District as they prepare to bring a much-needed aquifer protection district bylaw to spring town meeting.
- ◆ Ayer and JoAnne Kasper of the Montachusett Regional Planning Agency in their efforts to pass a water resource protection district bylaw.

Please let us know when your town adopts protection bylaws or utilizes non-regulatory measures to protect water supplies. Send us a copy for the library if possible. Please call us at (617) 292-5534 or 5931 for additional information, assistance, or to use our library. □

Private Well Guidelines Now Available

The Massachusetts Department of Environmental Protection Division of Water Supply recently completed two informational documents which pertain to private wells.

These two documents, **Private Well Guidelines** and **Model Board of Health Regulations for Private Wells**, were written primarily to assist Boards of Health but also to assist drillers by attempting to introduce some consistency regarding construction standards from town to town. The **Private Well Guidelines** also provides information useful to the private well owner, developers, and interested local officials.

The **Model Board of Health Regulations for Private Wells** provides general guidance. The **Private Well Guidelines**, on the other hand, is a more comprehensive reference and provides detailed information regarding well construction in addition to discussion of issues concerning local groundwater protection and water quality. Since the guidelines are intended as a reference, there is intentional redundancy.

Although the guidelines contain information that is applicable to private water supply systems that derive water from surface water sources, the primary focus is on systems that utilize a well to obtain groundwater.

Due to the dramatic increases in water rates in parts of Massachusetts, household irrigation wells have recently become an issue. The well construction requirements recommended in the guidelines and the model board of health regulations may be applied to irrigation wells. However, if the wells are used strictly for irrigation, some of the recommended water quality testing requirements are too stringent.

The two documents are sold together at the State Bookstore for \$6.85 plus \$1.75 postage. To receive a copy, call or write: State Book Store, State House Room 116, Boston, MA 02113; telephone number (617) 727-2834. □